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PERMANENT SOVEREIGNTY OVER NATIONAL RESOURCES IN THE OCCUPIED PALESTINIAN AND OTHER ARAB TERRITORIES

Israeli land and water practices and policies in the occupied Palestinian and other Arab territories

Note by Secretary-General

1. The Economic and Social Council, in its resolutions 1989/86 of 26 July 1989 and 1990/53 of 24 July 1990, requested the Secretary-General to prepare a comprehensive report on Israeli land and water policies and practices in the occupied Palestinian and other Arab territories and to submit the report to the General Assembly at its forty-sixth session through the Council.

2. At the request of the Secretary-General, the Economic and Social Commission for Western Asia has prepared a report on Israeli land and water policies and practices in the occupied Palestinian and other Arab territories. The report is annexed to the present document.

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* A/46/50.

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ANNEX

Report prepared by the Economic and Social Commission for Western Asia on Israeli land and water policies and practices in the occupied Palestinian and other Arab territories

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INTRODUCTION

1. Since its occupation of the West Bank, the Gaza Strip and the Syrian Arab Golan (the occupied Palestinian and other Arab territories) in June 1967, Israel has enacted a series of laws, regulations and decrees that have resulted in the seizure of Arab land and property, as well as sources of water, including groundwater in the West Bank and the Gaza Strip and from the Jordan River.

2. As a result of those policies and practices pursued by the Israeli authorities regarding land and water in the occupied Palestinian and other Arab territories, the area of Arab land under irrigation has been reduced, while irrigated areas in the Israeli settlements have been increased. Economic and living conditions in the occupied territories have consequently continued to deteriorate.

I. LAND AND WATER RESOURCES AND USES THEREOF IN ISRAEL AND THE OCCUPIED PALESTINIAN AND OTHER ARAB TERRITORIES

A. Background

3. As a result of its occupation of Palestinian and other Arab territories in June 1967, Israel gained full military control of all the land and water resources of the West Bank and the Gaza Strip, in addition to the greater part of the Syrian Arab Golan. As a consequence, a total of 7,113 km^2 (West Bank: 5,573 km^2; Gaza Strip: 360 km^2; Syrian Arab Golan: 1,180 km^2) with a population of 1,510,000 according to the 1988 census (West Bank: 900,000; Gaza Strip: 600,000; Syrian Arab Golan: 10,000) fell under Israeli administrative control. Table 1 shows basic land and water indicators for Israel and the occupied Palestinian and other Arab territories.

4. As a result of the 1982 Israeli invasion, Israel gained complete control of the land and water resources of southern Lebanon, particularly in the lower Litani River basin.

5. Between the occupation of the West Bank and the Gaza Strip in 1967 and the end of 1989, the Israeli military authorities issued over 2,000 military orders and laws regarding the occupied Palestinian and other Arab territories, including those relevant to water. A series of measures was taken by which the laws in force in the West Bank and the Gaza Strip before the Israeli occupation were abrogated. Furthermore, restrictions were imposed on agricultural expansion and the use of water by the Palestinian Arab inhabitants.

6. Israel and the occupied Palestinian and other Arab territories are situated in the arid or semi-arid regions of the world and their water resources are limited. The 1979 Israeli Bear report gives the annual water supply in an average year, as shown in table 2.

Table 1. Basic land and water indicators for Israel and the occupied Palestinian and other Arab territories

(1 dunum = 1,000 m^2)

	West Bank	Gaza Strip	Israel
Total area (dunums)	5 573 000	360 000	20 000 000
Population (1988)	900 000	600 000	4 300 000
Area of land cultivated (dunums)	2 100 000	214 000	4 250 000
Area of land irrigated (dunums)	110 000	120 000	1 850 000
Percentage of total land cultivated	38	59	21
Percentage of total land irrigated	5	56	44
Annual water consumption for irrigation (million m^3)	95	80	1 320
Annual water consumption for households (million m^3)	27	21	325
Annual water consumption for industry (million m^3)	3	2	125
Total annual water consumption (million m^3)	125	103	1 770
Total per capita water consumption (m^3)	139	172	411
Per capita water consumption per household (m^3)	30	35	75
Per capita water consumption for industry (m^3)	3.3	3.3	29
Per capita water consumption for irrigation (m^3)	106	133	307

Source: Israeli land and water policies and practices in the occupied Palestinian and Arab territories, unpublished study in Arabic (Economic and Social Commission for Western Asia, Baghdad, 1990), p. 8.

Table 2. Long-term potential mean yield of conventional water sources in Israel

(Millions of cubic metres per year)

Water source	Fresh	Saline	Total
Sea of Galilee (Kinneret) Basin (surface and groundwater)	570	20	590
Groundwater			
(a) wells (not including Galilee Basin)	699	125	824
(b) springs	75	97	172
Runoff water	135		135
Reclaimed waste water	325		325
Total	1 804	242	2 046

Source: K. K. Framji, B. D. Garg and S. D. L. Luthra, eds., Irrigation and Drainage in the World: a Global Review, 3rd edition (New Delhi, International Commission on Irrigation and Drainage, 1982), vol. II, p. 657.

7. The total available annual water resources are thus estimated at 2,046 million m^3, which represents approximately 20 per cent of the annual rainfall.

8. The annual water consumption in Israel was published by the Water Commission of the Israeli Ministry of Agriculture in February 1981, as shown in table 3.

9. The Water Commission estimated that the average yearly increase in water consumption was approximately 6 per cent and that the total annual water supply in Israel and the occupied Palestinian and other Arab territories as a whole would reach in 1990 a maximum of 2,070 million m^3. On the basis of population projections, and assuming constant per capita water consumption, the projected water demand by the year 2000 for Israel and the occupied Palestinian and other Arab territories would be faced with a deficit of 828 million m^3 of water annually. 1/

Table 3. Average annual water consumption in Israel

(Millions of cubic metres)

Consumer	Water quality	Annual water consumption 1979	Annual water consumption 1990 (estimated)
Agriculture	Sweet	1 210	960
	Brackish (treated)	120	155
	Waste water (treated)	60	230
Subtotal		1 390	1 345
Domestic and industrial	Sweet	300	540
Losses		40	40
Total		1 730	1 925

Source: K. K. Framji, B. D. Garg and S. D. L. Luthra, eds., Irrigation and Drainage in the World: Global Review, 3rd edition (New Delhi, International Commission on Irrigation and Drainage, 1982), vol. II, p. 662.

B. Land and land use in the occupied Palestinian and other Arab territories before the 1967 Israeli occupation

10. The terrain and the prevailing agricultural patterns in the West Bank, the Gaza Strip and the Syrian Arab Golan are briefly described below.

1. The West Bank

11. The Ghor area is lowland terrain ranging from about 240 m below sea level near Ghor Toubas-Bardala in the north to about 392 m below sea level at Ain al-Fashkha south of Jericho. The lowland area is locally known as the Ghor and comprises the western Jordan Valley. The area contains very fertile land and has substantial groundwater potential in the Ghor as well as the adjacent western escarpment flanking the Jordan Valley. In the decades preceding the Israeli occupation, Palestinian farmers were able to develop and fully reclaim this land to provide local and external markets with vegetables, citrus, bananas and other produce. It was one of the mainstays of agricultural growth in the West Bank.

12. The uplands include the regions of Hebron, Jerusalem and Nablus. Agriculture underwent rapid development in this area during the decades preceding Israeli occupation. Both rainfed and irrigated orchards of various types of fruit trees were cultivated, and grapevines covered large areas in this region. Olive trees were also grown and the region became famous for its olive oil, grapes and other fruit trees. Production met local market needs and was also exported, especially to the Arab Gulf countries. Grain crops such as wheat, barley and maize were also grown.

13. The semi-coastal region is situated in the north-west of the West Bank around the towns of Jenin and Tulkarm and surrounding villages. In this area, olive, citrus and other fruit trees were cultivated, and crops were grown, using both rainfed agriculture and groundwater irrigation schemes.

14. The total area of the West Bank is approximately 5.5 million dunums. According to the results of the 1965 agricultural census, agricultural holdings in the West Bank were typically small-scale: approximately 36 per cent were under 10 dunums and 70 per cent were under 50 dunums; these holdings consisted of small and usually dispersed parcels. Taking into consideration demographic developments in the area, it is clear that there is an increasing tendency for the size of these holdings to shrink further with time.

15. Following the establishment of Israel, Palestinians from the coastal region were forced to migrate towards the West Bank and East Bank of the Jordan. As a result unemployment rose and both banks of the Jordan faced a difficult economic situation in the early 1950s: 50 per cent of the labour force there worked in agriculture, which suffered from underemployment. However, strenuous development efforts enabled agriculture to double its contribution to the gross domestic product (GDP) from 14.2 million Jordanian dinars (JD) in 1954 to JD 27.7 million in 1966. According to the population and housing census of 1961, 35 per cent of the labour force in the West Bank worked in agriculture.

16. The Jordanian 1964-1970 Development Programme, which it was not possible to implement fully owing to the 1967 Israeli occupation of the West Bank, was aimed at increasing the area of agricultural land in the West Bank in order to raise the level of income from agriculture and improve the standard of living of farmers by increasing agricultural production through both horizontal and vertical expansion.

17. Statistics available indicate that 30 per cent of the agricultural land in the West Bank before 1967 depended on irrigation. The intention was to increase the area of land under irrigation to 40 per cent by the end of the Development Programme in 1970. The Programme also aimed at increasing the area of land planted with fruit trees and, in particular, at doubling the area planted with olives, almonds, grapes and other fruit trees, as well as various types of vegetables. In order to achieve those objectives, the Jordanian Government concentrated its efforts on providing easy-term loans to farmers. A special agricultural credit institution was established that offered both

West Bank and East Bank farmers medium- and long-term loans in order to enable them to redouble their efforts to exploit more land and to help them to expand their use of agricultural machinery, irrigation and fertilizers. Agricultural support services were also set up and agricultural research, extension and other services were expanded. Those supporting services provided by the Jordanian Government were needed because investment in agriculture was mainly from the private sector. The Government's responsibility was concentrated on providing those services which would enable the agricultural sector to make a growing contribution to food security and to increase its share of the GDP.

18. Government land in the West Bank was used for grazing. At that time, Jordan was self-sufficient in red meat and other livestock produce. Consequently, the dairy and leather products sectors flourished in the West bank, especially in the Hebron area and the eastern uplands.

2. Gaza Strip

19. The Gaza Strip is approximately 360 km^2 in area and is primarily privately owned. Agricultural holdings, as in the West Bank, are typically small-scale. The reclamation of land for agriculture had been proceeding at a growing pace in the decades leading to the June 1967 war. The private sector played an important and beneficial role in the development and exploitation of agricultural land during that period. The Gaza Strip was famous for its citrus orchards and dried fruit. Vegetables and other fruit produce were exported to Egypt and other countries, especially the Gulf Cooperation Council (GCC) countries. In the wake of the events of 1948, the Gaza Strip suffered from increased numbers of immigrants from Palestinian towns and villages that had become subject to control by Israel. Refugees were housed in camps throughout the Gaza Strip, which meant that the potential for horizontal agricultural expansion was limited. That led to a trend towards vertical expansion by encouraging farmers to use modern agricultural methods and chemical fertilizers in order to increase their production. Agriculture made considerable progress, bringing economic progress and a rising standard of living to local inhabitants in the years before the 1967 Israeli occupation.

3. Syrian Arab Golan

20. The Syrian Arab Golan comprises the upland plateau flanking the Haula Plain and the Sea of Galilee. In addition to Mount Hermon (2,814 m), with its substantial water resources, there are two main mountain ranges in the Golan: the first extends from the north-west to south-east towards the town of Quneitra and the second extends south-east from south of Quneitra to the village of El-Rafid.

21. The Golan has a large number of deep, abrupt valleys carved out by abundant winter rains and floods. They run west-south-west, carrying natural tributaries to the eastern banks of the Sea of Galilee and the right bank of the Yarmuk River.

22. The occupied Syrian Arab Golan is a fertile agricultural area and is well known for the cultivation of fruit, especially apples, almonds and grapes, in addition to vegetables and other crops. Agriculture and animal husbandry were the main sources of livelihood of the local inhabitants before the Israeli occupation of their land in June 1967. In the Syrian Arab Golan, agricultural land is owned mainly by small farmers whose holdings are small and dispersed.

C. Water resources in the occupied Palestinian and other Arab territories

23. In Israel and the occupied Palestinian and other Arab territories, rainfall decreases from north to south and from west to east with averages ranging from 700 mm per year in the region of Safad in the north to 60 mm per year near the Gulf of Aqaba in the south and 600 mm per year at Nahariya in the west to 150 mm per year near the Dead Sea. Rainfall is relatively abundant in the West Bank, ranging in an average year from 650 mm in the north to 300 mm in the south.

24. The average annual rainwater supply in the West Bank is approximately 2,800 million m^3 and the average annual rainwater supply in Israel and the occupied Palestinian and other Arab territories does not exceed 10,000 million m^3. That means that the rainwater resources in the West Bank alone represent over 25 per cent of the total rainwater resources. It is estimated that this annual rainfall is distributed as follows:

2,800 million m^3 = 1,900 million m^3 lost through evaporation
+ 625 million m^3 to groundwater basins
+ 225 million m^3 to rivers (Jordan, 'Auja)
+ 50 million m^3 as runoff.

25. In view of the extreme importance of groundwater basins in the West Bank and the Gaza Strip, the hydrogeological characteristics of these basins are given in tables 4 to 6.

26. In the Gaza Strip, a bulletin published by the Israeli military governor in 1980 indicated that there were 1,775 artesian wells, from which approximately 120 million m^3 of water was pumped annually. Annual rainfall in the Gaza Strip is estimated at approximately 300 to 400 mm, which serves to recharge the aquifers with approximately 70 to 80 million m^3 of water, in addition to groundwater that flows into the Gaza Strip from the east. There is thus an estimated annual shortfall in the groundwater supply in the Gaza Strip of approximately 15 to 20 million m^3. This depletion of groundwater has been one of the main reasons for intrusion by sea water into the aquifers and a rise in chlorine content to dangerous levels. Groundwater salinity in the Gaza Strip shows a constant deterioration year after year.

Table 4. North-eastern groundwater basin

Groundwater basin	Aquifer	Total pumped and/or spring discharge (million m^3 per year)	Recharge	Area (km^2)
Nablus/Jenin	Upper and Lower Cenomanian	92-114	80-95	300
Gilboa/Ta'nakh	Eocene	35	40-50	

Source: Economic and Social Commission for Western Asia; Arab Organization for Agricultural Development, Food Security in the West Bank and Gaza Strip (E/ESCWA/AGR/85/4) (Baghdad, United Nations; League of Arab States, 1985), p. 59.

Table 5. Western groundwater basin

Groundwater basin	Aquifer	Total pumped and/or spring discharge (million m^3 per year)	Recharge	Area (km^2)
Auja/Timsah	Upper and Lower Cenomanian	380-400	350-370	1 300
Hebron/ Beer Sheba	Upper and Lower Cenomanian	20-21	16.6-21	300

Source: Economic and Social Commission for Western Asia; Arab Organization for Agricultural Development, Food Security in the West Bank and Gaza Strip (E/ESCWA/AGR/85/4) (Baghdad, United Nations; League of Arab States, 1985), p. 57.

Table 6. South-eastern groundwater basin

Groundwater basin	Aquifer	Total pumped and/or spring discharge (million m^3 per year)	Recharge	Area (km^2)
Bardala	Upper and Lower Cenomanian	9-11	3-6	90
Buqei'ah/ El-Malih	Eocene and Upper and Lower Cenomanian	2	2-3	66
Fare'a	Neogene and Pleistocene	9-10	9-15	145
Fasayel/ Auja	Upper and Lower Cenomanian	12.5-15	24-40	610
Ramallah/ Jerusalem	Upper and Lower Cenomanian	25	50-70	610
Desert south of Jerusalem	Upper and Lower Cenomanian	6.2-6.7	35-40	590

Source: Economic and Social Commission for Western Asia; Arab Organization for Agricultural Development, Food Security in the West Bank and Gaza Strip (E/ESCWA/AGR/85/4) (Baghdad, United Nations; League of Arab States, 1985), p. 60.

27. Average annual rainfall on the Syrian Arab Golan is estimated at approximately 1,500 million m^3, most of which seeps into the aquifers to form the sources of the northern tributaries of the Jordan River. Before 1967, the Arab inhabitants numbered approximately 100,000 and their annual water consumption was about 12.5 million m^3. Most of those inhabitants left during the 1967 war, leaving only some 10,000 Syrian Arabs in the occupied Golan in 1988. 2/

28. Hydrologically, the Syrian Arab Golan is divided into two main watersheds: one has an area of 950 km^2 and empties into the Sea of Galilee; the other has an area of 200 km^2 and flows into the Raqqad Valley. However, the Golan lacks sources of water suitable for use on a large scale. Numerous small springs are found scattered throughout the area, but cannot be used for water projects. A number of wells have been drilled in the north and centre of the Golan; however, their yield has been low. Available water resources do not exceed 20 million m^3 annually. 2/ For that reason, Israel pumps the greater part of the current water needs of the Israeli settlements for domestic purposes and irrigation from the Sea of Galilee. The Kursi project was established on the East Bank of the Sea of Galilee and currently pumps approximately 13 million m^3 of water per year to an altitude of over 600 m. 3/

II. ISRAELI POLICIES AND PRACTICES REGARDING LAND AND SETTLEMENT

A. Israeli policies and practices

29. Israeli land and water policies in the occupied Palestinian and other Arab territories formed an integral part of the strategy of settlement as the key mechanism for Israeli control of those territories.

30. Two distinct phases of Israeli settlement policies can be identified. The first, from 1968, was concurrent with the coalition (Labour party) Government. The second, from 1978 to the present, coincides with the Likud administration (1978-1984) and the Government of national unity (1984-present). 4/

31. Israeli settlement policies are aimed at bolstering the Israeli economy and creating an integrated economic, agricultural and industrial base. Agricultural settlements were established on the most fertile land and on suitable sites (type of soil, abundance of groundwater, etc.).

32. Regarding industrial activities of the settlements Yigal Allon stated:

> "The idea behind the industrially based settlements on the Golan and in parts of Judea and Samarea is that it is not enough to establish small settlements based on agriculture in strategically vital zones. If we are to have a large population in these areas, industrially based townlets are needed". 5/

33. The types of investment directed to settlements, as shown in table 7, reflect the integrated economic and social activities.

Table 7. Investment in settlements, 1968-1987

	Units			Investment (millions of United States dollars)			
	1982	1984	1986	1982	1984	1986	Remarks
Housing: apartments	12 400	16 900	17 950	690	929	987 40.7*	Including temporary, under construction
Industrial production	1 260	1 610	2 362	328	418	614 25.4*	Thousand m^2
Agriculture	55	55	55	55	75	95 3.9*	Thousand dunums
Water	..	..	..	122	142	162 6.7*	Main and local grids
Roads	200	-	288	75	90	101 4.2*	Km paved
Telecommunication	2 400	9 000	15 850	15	23	39 1.6*	Subscribers
Electricity	..	..	..	15	25	30 1.3*	Estimate, excluding East Jerusalem Electric Corporation
Education	..	336	432	-	40	51 2.1*	Classrooms
Health clinics (ambulances)	..	71	98/61	..	4	7 0.3*	Clinics/ ambulances
Unspecified	..	..	..	250	325	335 13.8*	WZO, transport community services, etc.
Total				1 550	2 071	2 421 100	

Source: Meron Ben Venisti and Shalomo Khayat, The West Bank and Gaza Atlas (Jerusalem: West Bank Data project, The Jerusalem Post, 1988), p. 32.

* Percentage of total 1986 investment.

34. The establishment of integrated Jewish communities in the occupied Palestinian and other Arab territories does not take into account the interests of the Arab population. According to the West Bank Data Base project, the average annual increase in the number of settlers in the first decade was 770 (peak 2,300), while in the second decade the average annual increase was 5,960 (peak 16,646). 4/ According to a study prepared by the United Nations Conference on Trade and Development (UNCTAD), in 1987, 1 per cent of the 12,900 new immigrants to Israel settled in the West Bank (including East Jerusalem) or the Gaza Strip. That proportion was expected to have reached 5 per cent for 1990 (TD/B/1266, p. 7).

35. Israeli authorities continue to provide material incentives to encourage settlement in the West Bank and Gaza Strip.

> "These include disproportionately high public investment in settlements compared to similar-size Israeli localities, stronger investment incentives accorded to industrial zones in the settlements, higher housing subsidies and lower land value assessments for home building schemes in the settlements, income and other tax relief granted to settlers, the higher regular (maintenance) public expenditures on services in settlements and higher government per capita budget grants to settlements than to localities in Israel itself" (ibid., p. 19).

36. Concern has been expressed at the growing number of settlements in all the territories occupied by Israel since 1967, including Jerusalem, particularly in the light of the influx of immigrants to Israel in recent years. The establishment of such settlements stands in violation of the provisions of both the Fourth Geneva Convention and Security Council resolution 465 (1980), by which the Council determined that all measures taken by Israel to change the physical character, demographic composition, institutional structure or status of the occupied Arab territories had no legal validity.

37. Since its occupation of the West Bank, the Gaza Strip and the Syrian Arab Golan in June 1967, Israel has used the following laws and regulations to seize Arab land:

(a) The Law of Expropriation of Land in the Public Interest, enacted by the British mandatory authorities in Palestine in 1943;

(b) The Emergency Defence Law, enacted by the British mandatory authorities in Palestine in 1945;

(c) The Emergency Law for the Utilization of Unproductive Land, enacted in 1948 by Israel. This law was drawn up to enable the Israeli Minister of Agriculture to exercise his power to confiscate land if he was convinced that the owner did not intend to use it for agricultural purposes. It has also been used in the occupied territories from 1967 until the present;

(d) The Law of Confiscation of Property and Real Estate, enacted by Israel in 1949. By virtue of this law, the Israeli authorities have the right to confiscate any property or real estate which they believe to be vital to Israeli national security. This law has been used extensively since the Israeli occupation of the West Bank and Gaza Strip, as well as the Syrian Arab Golan, to confiscate Arab land and sources of water;

(e) The Absentee Property Law, decreed by the Knesset on 14 March 1950 in replacement of the Emergency Law issued on 19 December 1949 concerning the seizure of absentee property. Since it was issued, this law has been used to seize the property of persons the Israeli occupation authorities consider to be absent or resident abroad. By 1976 Israeli land experts completed the survey of absentee and government properties and took possession of these categories of land by virtue of orders No. 58 and 59. 6/

38. On the basis of these laws and regulations, between June 1967 and the end of 1990 the following land areas were confiscated:

(a) A total of 2,895,642 dunums in the occupied West Bank, representing 52.6 per cent of the total land area of the West Bank; 7/

(b) A total of 153,475 dunums in the Gaza Strip, representing 42.3 per cent of the total land area of the Gaza Strip;

(c) 69.4 per cent of the total land area of the Syrian Arab Golan.

39. The confiscation of land has been the first step in the establishment of Israeli settlements in the occupied territories, using an integrated range of practices and measures, which may be summarized as follows:

(a) Preparing the necessary plans as a preliminary step to confiscating land from Arab farmers;

(b) Sending survey teams to determine the location and area of land intended for confiscation;

(c) Issuing the confiscation order;

(d) Sending official notification to local inhabitants and land owners that their land has been confiscated;

(e) Sending an order to inhabitants of the area concerned forbidding them to trespass on the confiscated land, and declaring it off limits for security reasons;

(f) Fencing off confiscated land with barbed wire;

(g) The Israeli army, in collaboration with Israeli settlers in the area, prevents Arab farmers from entering their confiscated land and from exploiting it in any way, whether by sowing crops, picking fruit or grazing animals;

(h) Advising the relevant authorities in Israel to implement the settlement plan on the confiscated land, or to establish a new settlement through the following arrangements and facilities:

(i) Machines and equipment are sent in to lay and pave roads across the confiscated land and to uproot fruit trees there;

(ii) Construction work is begun by Israeli contractors according to the plans for the intended settlement;

(iii) The executing authority endeavours to market the new housing units in the new settlement to Israelis at prices lower than those in Israeli towns and villages;

(iv) Settlers in the new settlement are usually armed.

40. Israeli settlements cover large areas of the Syrian Arab Golan and the Gaza Strip and are spread throughout all parts of the West Bank in the form of clusters of settlements surrounding Arab towns and villages. These settlements are linked by a network of highways to each other and to Israeli population centres.

41. In connection with this plan, the Israeli authorities are building a network of roads in order to develop their settlement plan in the West Bank. Among the main road projects being executed are the following:

(a) Route 50, approximately 55.5 km long: it has been decided that this road shall cut across the West Bank from north to south and from east to west dividing it into four quarters. The construction of this road will require some 8,000 dunums of Palestinian land;

(b) Route 60, which is to link Jerusalem with the settlement of Gush Etzion north-west of Hebron: this road will traverse vineyards and fruit orchards in the region south of Jerusalem and pass through a number of rural population centres in that region. Large areas of land have been expropriated in order to build this road.

42. Furthermore, other roads have been built as part of the Israeli settlement plan, such as the settlement ring road around the Arab town of Qalqilya in the north-west of the West Bank.

B. Economic and social consequences

43. The Israeli settlement policies and practices have had serious consequences on the economic and social conditions of the Palestinian and Arab people under occupation and on their potential for development.

44. A study prepared by UNCTAD on recent economic developments in the occupied Palestinian territory (TD/B/1142) indicated that the policy,

practices and measures of the Israeli occupation of the West Bank and the Gaza Strip had brought about radical changes in the structure of their economy, which had adversely affected economic growth and development. Agriculture remained the backbone of development in the occupied Arab territories, despite its declining contribution to GDP. That study demonstrated clearly that the total cultivated area had decreased from 36 per cent in 1966 to 27 per cent in 1984 of the total land area of the occupied West Bank, and in the occupied Gaza Strip from 55 per cent of total area in 1966 to 28 per cent in 1985.

45. Confiscation of land had adversely affected agricultural production and income in the West Bank and the Gaza Strip; income from agriculture declined from 1,505 million shekels in 1978 to 1,488 million shekels in 1984 in constant 1980 prices. As a result, according to another study of UNCTAD (UNCTAD/ST/SEU/4), the share of agriculture in GDP declined in constant prices from 32 per cent in 1978 to 28 per cent in 1984.

46. According to the same study, income from agriculture in the West Bank declined from $US 237 million in 1981 to $US 204 million in 1985. In the Gaza Strip it declined from $US 66 million in 1981 to $US 61 million in 1985, in spite of the fact that farmers were making increasing use of modern techniques in order to improve agricultural production in those areas.

47. As a result of the negative impact of the confiscation of agricultural land in the West Bank and the Gaza Strip, employment in agriculture fell from 38.7 per cent of the total workforce in 1970 to 24.4 per cent in 1985.

48. According to the report of the International Labour Organisation (ILO) on the situation of workers of the occupied Arab territories, submitted to the International Labour Conference at its 77th session, in 1990, "Endogenous development efforts are frequently frustrated or undone for administrative or security reasons". 8/ While evaluating Israeli policies and practices on the agricultural sector, the impact of the report highlighted the following points:

(a) "Agriculture remains the backbone of the economy but performance over the decade has been disappointing for lack of land, water and markets."; 9/

(b) Despite increased productivity as a result of the introduction of new technologies in agriculture, the new corresponding marketing opportunities were lacking; 10/

(c) "Agricultural employment in [the occupied] territories dropped from almost 60,000 workers in 1970 to 38,500 workers in 1987." The share of agricultural employment also dropped from 40 per cent to around 25 per cent. "In other words, thousands of workers left because they or their employers had lost their land or could not expand for lack of water; or because they could not compete in the home market with subsidized imports from Israel; or because they found barriers to buying farm inputs or to selling their products abroad". 10/

49. The reduction in the number of job opportunities and the spread of unemployment have been among the adverse consequences of the confiscation of agricultural land in the occupied Palestinian and other Arab territories, and have led to an increase in the numbers of workers from the occupied territories emigrating to Jordan and the GCC countries in search of a source of livelihood. A report published by the Arab Labour Organization in 1982 indicated that between 1967 and 1981, 140,000 workers had emigrated to those countries in search of work.

50. Mention should also be made of the uprooting of fruit trees by the Israeli authorities from the land of Arab farmers in the occupied territories. The Israeli newspaper Ha'aretz (29 March 1989) noted that the Israeli authorities had uprooted 23,400 trees in the occupied territories during the first year of the intifadah.

51. A survey of the fruit trees uprooted from Arab farmers' land in the occupied territories was published in the 1989 annual report of the Jordanian Ministry of Labour, as shown in table 8.

Table 8. Destruction of trees and crops, 1989

Month	Olive trees uprooted	Citrus trees uprooted	Other fruit trees uprooted	Number of Arab towns and villages affected
January	2 285	210	90	14
February	925	105	200	10
March	1 417	-	330	9
April	3 337	100	7 000	16
May	4 110	2400 dunums of crops ploughed under.	12 dunums of grapes.	22
June	847	50 dunums of crops ploughed under.	550 dunums sprayed with chemical substances.	10
July	120	300	3	8
August	2 033	112	4 dunums ploughed under.	12
September	621	380	430	12
October	177	60	2 620	14
November	251	30	-	5
December	805	-	-	6

Source: Compiled from Government of Jordan, Ministry of Labour, Research Department, The impact of Israeli policies and practices on the conditions of Arab workers in the occupied Arab territories (published in Arabic), Annual report 1989 (Amman, January 1990).

52. Accordingly, the number of fruit trees uprooted in 1989 from Arab farms through actions by the occupation authorities connected with the confiscation of Arab land was no less than 30,000, of which 16,928 were olive trees. The number of towns and villages affected by these actions in the same year was 138.

53. Israeli policies and practices concerning land and settlement in the Syrian Arab Golan had the following consequences:

(a) A constant increase in the population of Israeli settlers in the Golan. The non-Israeli population increased by 13.2 per cent during the period from June 1983 to December 1988, while the Israeli population increased by 41 per cent during the same period; 11/

(b) The sharing with the Arab population and exploitation of the limited agricultural and water resources of the Golan by the Israeli settlers has aggravated the difficulties facing the Arab economy, which relies mainly on agricultural activities and resources (fertile soil, pasture and water resources). The ILO report states the following: "In the view of the Arab inhabitants of the Golan these difficulties are due to the state of occupation, aggravated by the annexation and the presence of the settlers"; 12/

(c) The marketing of apples, which constitute the only exportable product, has been subjected to certain restrictions and competition from the Israeli settlements; 13/

(d) The amount of agricultural land owned by the Arab population has been reduced. According to the ILO report, "Druse spokesmen also told the Director-General's representatives that the village of Mas'ada had a total area of 3,000 dunums of fertile land, but that only one third, 1,000 dunums, had been left to the Arab villagers". 14/

III. ISRAELI POLICIES AND PRACTICES REGARDING WATER

A. Israeli policies and practices

54. The Israeli military commander issued Order No. 92 on 15 August 1967 conferring what were called Mandatory Powers in respect of Water Regulations (translated from Arabic). This order was followed by numerous others all aimed at making basic modifications to the water laws and regulations in force on the eve of the June 1967 war in the West Bank, the Gaza Strip and the Syrian Arab Golan. One of the orders issued at that time, Order No. 158, enabled the Israeli occupation authorities to place the following restrictions on water resources:

(a) Water installations could not be built, assembled, owned or operated without a permit from the Israeli military governor;

(b) Applications should be submitted to the military Governor for permits to exploit groundwater or to execute any irrigation project, and the military governor had full power to grant or withhold permits without giving any reason in case of a refusal. 15/

55. By virtue of that order, permits were given to Israeli settlers to drill deep artesian wells close to shallower Arab wells, which thus dried up, harming crops, since the water had been drawn off to the Israeli wells.

56. A series of military orders has been issued by the Israeli military Governors in the occupied West Bank, the Gaza Strip and the Syrian Arab Golan; of those concerning water, the most important are the following:

(a) Order No. 92 of 15 August 1967 on water resources and water use in the occupied West Bank;

(b) Order No. 158 of 30 October 1967 amending the law on supervision of water in the West Bank;

(c) Order No. 498 of 4 November 1974 on water in the Gaza Strip.

57. All of those military orders have stipulated rules and regulations regarding water and water transfer, extraction, consumption, sale and distribution, the control of water use, water sharing and rationing, consumption of water, the construction of water installations, the drilling of wells, the granting of permits and all matters regarding water resources, whether groundwater or surface water, including springs, ponds, streams and rivers, as well as the setting of prices and quantities allowable for use by indigenous Arab inhabitants and farmers in the occupied Palestinian and other Arab territories. At the same time, these orders have made it easier for the Israeli authorities and settlers to seize and utilize water in the occupied territories. 16/

58. As a result of the foregoing, the Israeli authorities have gained control over water resources in the West Bank, the Gaza Strip and the Syrian Arab Golan. Other measures that have been taken include the following:

(a) Since its occupation of the Golan, Israel has established over 20 settlements, in addition to several industries and research centres. In accordance with the Jewish Agency Plan, each settlement is given 4,500 dunums of agricultural land, of which 2,500 dunums are used for grain crops under irrigation, 500 dunums for trees and 1,500 dunums for various other crops. Israel estimates that the water needs of its settlements in the Golan, according to their plans, will reach approximately 46 million m^3 per year, distributed as follows: 17/ (i) 8.7 million m^3 per year for settlements in the north of the Golan; (ii) 6.0 million m^3 per year for settlements in the centre of the Golan; and (iii) 31.6 million m^3 per year for settlements in the south of the Golan. The expected sources of water are: (i) 16 million m^3 per year from the Sea of Galilee; (ii) 11 million m^3 per year from the Hemmah springs and from the River Jordan;

(iii) 10 million m^3 per year from wells and springs in the Golan Heights; and (iv) 9 million m^3 per year from the construction of small dams to collect runoff;

(b) The Israeli company Mekorot has been given responsibility for all drilling operations for artesian wells throughout the occupied Arab territories. In Golan, Mekorot has a monopoly whereby every inhabitant must ask Mekorot for permission to collect rainwater. The Arab inhabitants of the Golan have been forced to demolish some of their own reservoirs and the Israeli army has dynamited a number of others. 18/ At present, only three or four reservoirs are authorized out of approximately 400 that had been built after the inhabitants adopted the system of collecting and using rainwater through reservoirs;

(c) The Israeli Water Board has been given responsibility for all operations regarding water distribution in the occupied Palestinian and other Arab territories and it has been allowed to install water metres in the artesian wells owned by Arab farmers in order to control the quantities of water extracted;

(d) In accordance with the military orders and administrative measures regarding water referred to above, the Israeli authorities have imposed tight restrictions on water use in the West Bank, the Gaza Strip and the Golan, where Arab farmers are prohibited from drilling artesian wells to irrigate the land they own. Permits are sometimes granted to drill wells to depths not exceeding 60 metres and for domestic purposes only. Israelis in the settlements are allowed to drill to depths of up to 500 metres;

(e) Owing to the sealing off of many agricultural areas as closed security areas, several hundred water pumps owned by Arab farmers, which were used to pump water from the Jordan River to irrigate their farms in the Ghor region of the West Bank, have been destroyed. Irrigation canals which supplied Arab farms in the region of El-Jiftlik with water have also been damaged. That has had an adverse effect on the agriculture and the economic and social life of that region;

(f) Citrus trees have been uprooted and Arab farmers have been prevented from planting new citrus trees, both in the Ghor region of the West Bank and in the Gaza Strip. In the Golan Arab farmers have also been prevented from planting apple and other fruit trees;

(g) Ram Lake, the largest body of water in the Golan, has been seized by the Israeli authorities. As a result, villages in the Golan have suffered a critical shortfall in drinking and irrigation water, while the water of Ram Lake has been diverted to Israeli settlements to satisfy the needs of the settlers and their agricultural and industrial projects in the area.

B. Economic and social consequences

59. The consequences of Israeli policies and practices regarding water may be described as follows:

(a) A state of conflict and competition over land and water resources has arisen and continues to prevail. That has had an adverse impact on the living conditions of Palestinians. The Israeli settlements in Jordan valley, for example, are in direct competition with the Arab villages for the limited resources of the West Bank; 19/

(b) The usable groundwater reserves in the West Bank are estimated at approximately 600 million m^3 per year. The Israeli occupation authorities are currently pumping approximately 500 million m^3 per year, leaving only 100 million m^3 per year for use by the West Bank, or 16.6 per cent of the water available in the West Bank;

(c) The deep wells drilled by the Israeli authorities in the occupied Palestinian and other Arab territories has affected the level and quantity of water in Arab wells, resulting in a reduction of their productive capacity and the drying up of some of those wells and thus the drying up of agricultural land that depended on those wells for irrigation water;

(d) Overexploitation of groundwater in the Gaza Strip and the great increase in water use by settlers in Israeli settlements has resulted in increased salinity through seawater intrusion. Approximately 50 per cent of the wells in the Gaza Strip have become unfit for human use and most of them are unfit for irrigation due to the high salinity levels;

(e) As in the West Bank and the Gaza Strip, the continued arbitrary practices of the Israeli occupation authorities aimed at confiscating land and gaining control of water resources in the occupied Syrian Arab Golan have reduced the area under cultivation, curtailed local development potential and lowered the local level of income from work in agriculture.

Notes

1/ Al-Mostakbal Study Centre, From the waters of the (West) Bank to the Yarmuk dam: the Danger Triangle, Al-Mostakbal (Arabic weekly magazine published in Paris), No. 545, 1 August 1987, p. 32.

2/ See International Labour Office (ILO), Report of the Director-General: Appendices (vol. 2), Appendix II: "Report on the situation of workers in the occupied Arab territories" (Geneva, 1990).

3/ Mounir Ashlaq, Water and water use in Palestine, in Economic and Social Commission for Western Asia, Proceedings of the Ad Hoc Expert Group meeting on Water Security in the ESCWA region, Damascus, 13-16 November 1989 (E/ESCWA/NR/1990/3) (Baghdad, 1990), p. 318.

Notes (continued)

4/ Meron Benvenisti and Shlomo Khayat, The West Bank and Gaza Atlas (Jerusalem: West Bank Data Base project, The Jerusalem Post, 1988), p. 32.

5/ William Wilson Harris, Taking Root: Israeli settlement in the West Bank, the Golan and Gaza Sinai, 1967-1980 (Research Studies Press, 1980), p. 184.

6/ Meron Benvenisti, The West Bank Data project: A survey of Israel's Policies (Washington, D.C., American Enterprise Institute - Studies in foreign policy, 1984), p. 32.

7/ Government of Jordan, Ministry of Labour, Research Department, The impact of Israeli policies and practices on the conditions of Arab workers in the occupied Arab territories (published in Arabic), Annual report 1990 (Amman, January 1991), pp. 107-113.

8/ ILO, op. cit., para. 17.

9/ Ibid., para. 21.

10/ Ibid., para. 41.

11/ Ibid., para. 109.

12/ Ibid., para. 110.

13/ Ibid., para. 113.

14/ Ibid., para. 114.

15/ Department of the Affairs of the Occupied Homeland, Israeli designs on West Bank water (published in Arabic), Study No. 1 (Amman, Ibn Rushd Publishers and Distributors, 1987), pp. 15-16.

16/ Ibid., pp. 16-31.

17/ Adel Abdel-Salam, "Water in Palestine", in Palestine Encylopedia, Part Two, vol. 1, Geographic studies (Beirut, 1990), p. 258 (in Arabic).

18/ ILO, op. cit., para. 111.

19/ David Kahan, Agriculture and water in the West Bank and Gaza (Jerusalem, The West Bank Data Base project, 1983), pp. 165-166.